



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,088	10/10/2006	Shigenori Kuga	MNA-001	4709
31281 7590 12/02/2008 McLELAND PATENT LAW OFFICE, P.L.L.C. 11320 RANDOM HILLS ROAD SUITE 250 FAIRFAX, VA 22030				
EXAMINER				
LAU, JONATHAN S				
ART UNIT		PAPER NUMBER		
1623				
MAIL DATE		DELIVERY MODE		
12/02/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ADVISORY ACTION

Continuation of 11.

Applicant's Remarks, filed 12 Nov 2008, have been fully considered and not found to be persuasive.

With regard to rejection of claims 1-5 and 7 under 35 U.S.C. 102(b) as being anticipated by McCandliss et al. (US Patent 4,536,207, issued 20 Aug 1985, of record) with evidence of inherency shown by Falini et al. (Tissue Engineering, 2004, vol 10, p1-6), Applicant remarks that McCandliss et al. discloses the preferred embodiments of chitin from crustaceans which is not β -chitin. However, the broader disclosure of the invention of McCandliss et al. encompasses chitin from mollusks (column 5, lines 38-43). Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments, see MPEP 2123 I and II. Applicant remarks that the invention of McCandliss et al. produced during demineralization and partial protein degradation makes a product that is structurally different from the instantly claimed compound. However, McCandliss et al. discloses the raw material used to make the chitin-protein complex contains calcium carbonate and small amounts of other mineral salts (McCandliss et al. column 6, lines 30-35), and it is this material that is removed during the demineralization process in dilute acid (McCandliss et al. column 6, lines 36-45). Falini et al. is relied upon to disclose the inherent structure of the β -chitin from mollusks encompassed in the broader disclosure of the invention of McCandliss et al. Falini et al. discloses the chitin is a template upon which calcium carbonate is deposited and the structure of the chitin template is revealed

when the inorganic component is removed by dissolution in acid (Falini et al. page 2, right column, paragraph 1), supporting the finding that the β -chitin of the broader disclosure of the invention of McCandliss et al. retains the inherent structure of the β -chitin from mollusks disclosed by Falini et al.

With regard to the rejection of claims 1-7 under 35 U.S.C. 103(a) as being unpatentable over Drohan et al. (US Patent 6,124,273, issued 26 Sep 2000, of record) in view of Kim et al. (Journal of Polymer Science: Part B: Polymer Physics, 1996, 34, p2367-2374, of record), Applicant remarks that the combination of Drohan et al. in view of Kim et al. does not result in the instantly claimed manufactured β -chitin complex described as an intercalation compound. However, as provided by the ordinary IUPAC definition of an inclusion compound encompasses any complex in which one component is located within another component, and an intercalation compound is one in which the matrix has a laminar structure. Kim et al. teaches the use of β -chitin with a crystalline structure (page 2370, right column, paragraph 2), which is inherently a laminar structure. Drohan et al. teaches a chitin hydrogel matrix in which other components may be dispersed or dissolved (column 12, lines 55-58), or located within said chitin hydrogel matrix. Therefore, broadly interpreted, the teaching of Drohan et al. in view of Kim et al. teaches the limitation of a β -chitin complex according to the limitations of the instantly claimed invention.

/Shaojia Anna Jiang/

Supervisory Patent Examiner, Art Unit 1623